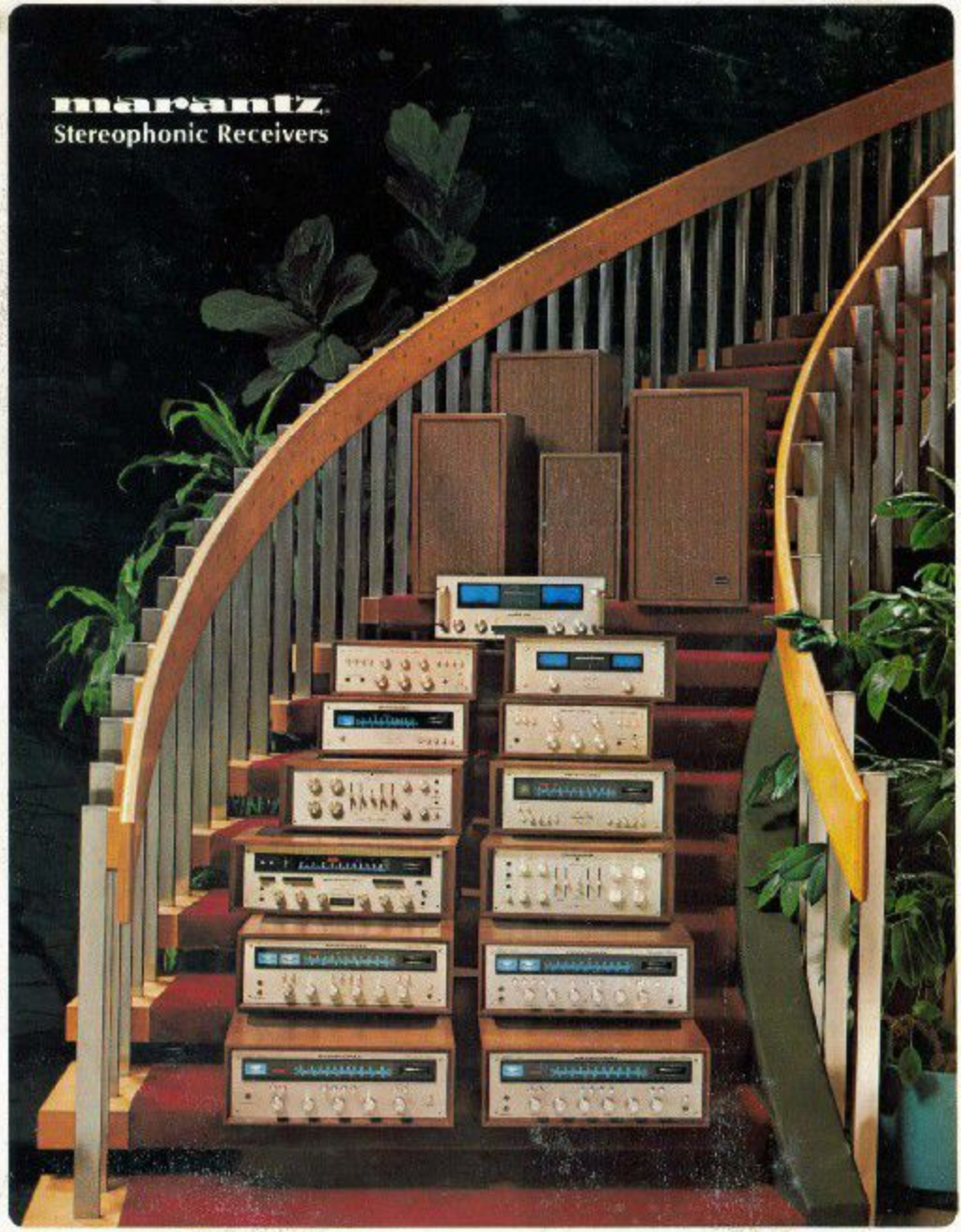

marantz
Stereophonic Receivers

Why Marantz wants you to know all about stereo receivers...

Most high fidelity enthusiasts will tell you that a basic stereo system is only as good as its receiver.

But it's not enough to say that a receiver must be good. Marantz wants you to know why. The reason? So you won't end up buying just any receiver, but one that you can truly live with — in terms of price, performance, and versatility.

Below you will find almost every question about stereo receivers you could ask. Further, we've taken out all the mystery about buying a receiver. And in its place, we've given you interesting and easy-to-understand answers necessary to help make your selection a wise one.

Fact is, the more you know about stereo receivers, the more likely you are to choose a Marantz . . . and value it as one of the best buys you ever made.

QUESTION: Exactly what is a receiver?

ANSWER: A receiver consists of three basic audio components — a tuner, a preamplifier, and a power amplifier all built into a single enclosure, or chassis.

Q. Are these three components available as separate stereo units, each in its own chassis?

A. Yes. But remember, we are limiting our discussion to basic stereo systems; i.e., a receiver and two speakers.

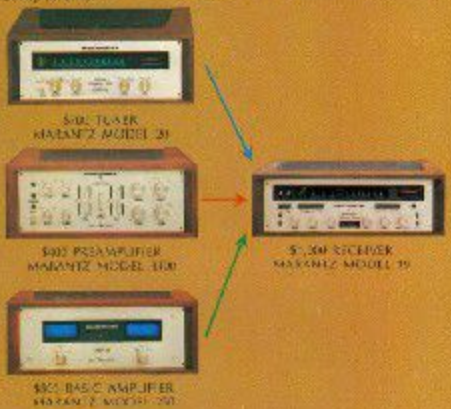
Q. Then right away I see that a receiver can save me a lot of space compared to separate components. But will buying a receiver save me any money?

A. As a matter of fact, yes! Because you're paying for only one chassis, instead of three individual ones. So, in essence, you're getting more for your money.

Q. Wait a minute! I don't believe that I'm getting something for nothing. Just what must I sacrifice for the convenience and lower-cost of, say, a Marantz receiver?

A. Good question. Logically, to save money, you must give up something. However, a reputable manufacturer, such as Marantz, will not reduce quality to reduce price. Instead, logical "trade-offs" are made in features, specifications, or power. For example, if you were to buy as separate components, the $1,000 Marantz Model 19's tuner, preamplifier, and power amplifier, you'd have to pay almost $1,600! Because, in effect, you'd be getting a $700 Marantz tuner, and close to a $400 Marantz preamplifier and a $500 Marantz power amplifier!

Our graphic illustration shown below compares a $1,000 Marantz receiver with $1,600 worth of separate components.



Q. I see. But what was traded off to save $600?

A. Power: down from a roof-shaking 250 watts to a mere window-breaking 100 watts. And features are reduced from an awesome selection to those a music lover really needs.

Q. But what about a Marantz stereo receiver that I can afford? And don't tell me your lower-priced receivers are "just as good."

A. Well, in a sense, they really are. Because we demand one ultimate standard of workmanship, durability, and predictability of performance in every receiver we build. To reduce price, we don't reduce quality. Rather, we make reasonable trade-offs, so that you can get our performance standard at your price.

Q. What you're really saying is, the same uncompromised quality is in every Marantz receiver, regardless of cost.

A. Correct.

Q. Let's say that I'm starting from scratch. How should a Marantz receiver, for example, match-up to the rest of my stereo system?

A. We suggest that you start off with the best stereo receiver that fits into your budget and couple it to a pair of modestly-priced speakers.

Q. Should I worry about compromising the speakers?

A. No, because a good receiver offers tremendous tone control to make these inexpensive speakers sound great. Later on, when you can afford some truly great speakers, you'll have the quality receiver necessary to drive them. Then you can use that first pair for four-channel, or to extend your stereo to another room.

Q. In other words, a good quality receiver determines the ultimate quality of my stereo system.

A. Right. And a good receiver will also provide the versatility to add any variety of sources, such as tape decks, record changers, and four-channel devices.

Q. Now, how can I use technical descriptions to help me decide, when I don't understand what specifications really mean?

A. The only logical importance of any specification is in what it will do for you, in your stereo system. And you can understand specifications — if they're stated in a meaningful way. For example, receiver specifications should include technical descriptions on all down built-in component sections. And if each section is good, the receiver is good.

Q. Are you implying that some specifications are sort of double-talk, and not practical indicators of what I want to enjoy?

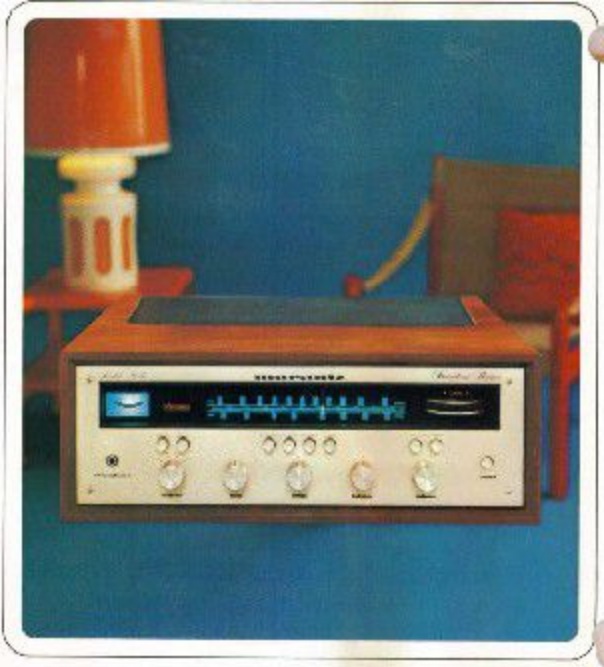
A. Yes. For example, power ratings can be a "numbers game," like quoting acceleration for a sports car as "0-100 mph in 10 seconds," and omitting "down an iced ski slope." Our fundamental glossary on page 7 won't qualify you for an engineering degree. But its straight talk will help you make logical comparisons.

(continued on page 7)

MARANTZ MODEL 2215
AM/FM STEREO RECEIVER

Traditional Marantz quality and high performance make the exciting Model 2215 a lot of receiver for little money. With utmost reliability, it offers 30 Watts continuous RMS into 8 ohm speakers, from 40Hz to 20 kHz with total harmonic and intermodulation distortion less than 0.9%. Frequency response is an amazing ±1dB! The professional preamp control section includes provisions for record changer, tape decks, phones, etc., plus precision control over virtually every audio variable. Behind the Model 2215's gold-anodized front panel are: low-noise, low-distortion FET, RF and IF circuitry; massive heat sinks; and automatic protection for internal circuitry and associated speakers. Completely enclosed metal chassis is finished in simulated walnut.

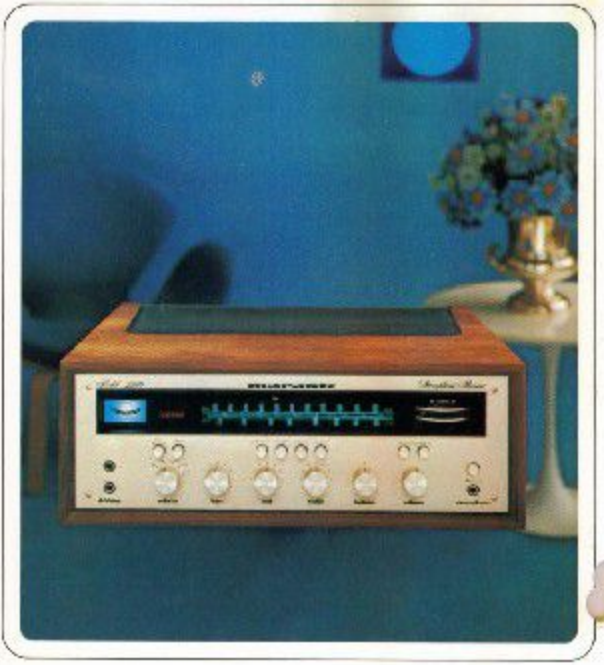
16⅞" x 5" x 14", 26 lbs., shown with optional WC-22 walnut cabinet

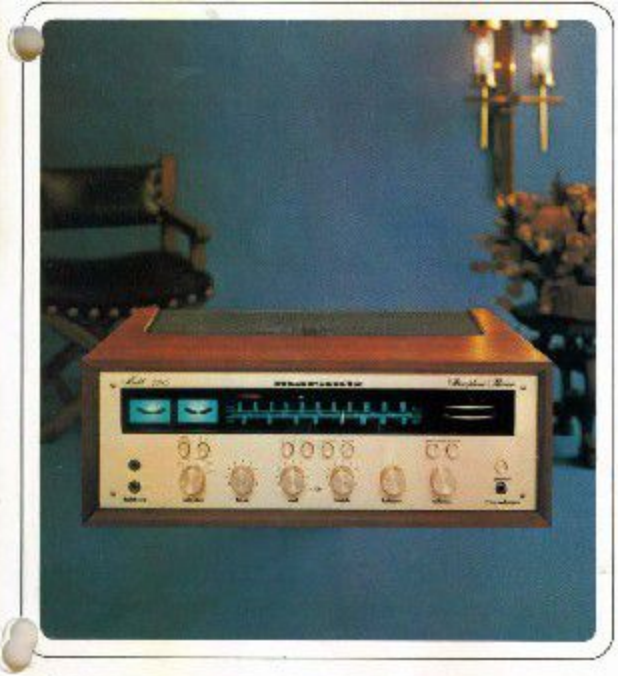


MARANTZ MODEL 2230
AM/FM STEREO RECEIVER

With impressive specifications and Marantz-exclusive features, the low-priced Model 2230 offers more value and performance than any other receiver in its class. It delivers 60 Watts continuous RMS into 8 ohm speakers from 40Hz to 20 kHz with total harmonic and intermodulation distortion under 0.5%. Frequency response is ±0.5dB! Stepped, three zone controls for BASS, MID, TREBLE. Provisions for tape decks, phones, record changers, 4-channel adaptors. Ultra low-distortion FET, RF, and IF circuitry. Massive heat sinks; automatic protection for internal circuitry and associated speakers, plus the famous Marantz gold-anodized front panel. Completely enclosed metal chassis finished in simulated walnut.

16⅞" x 5" x 14", 30 lbs., shown with optional WC-22 walnut cabinet

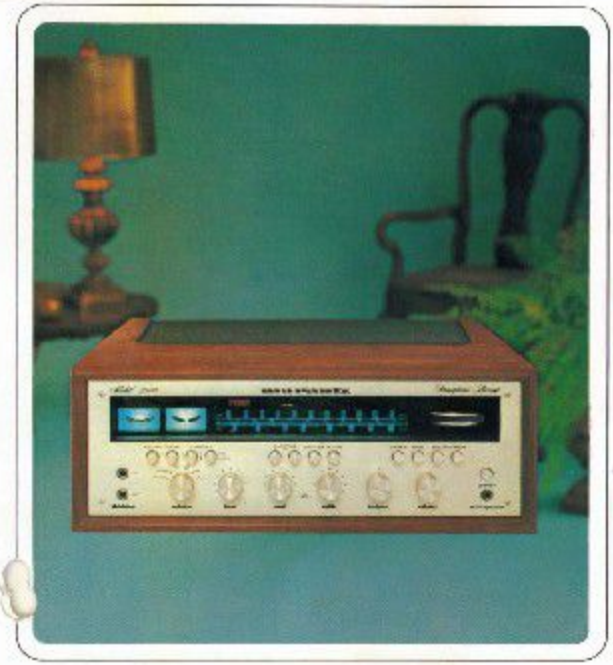




MARANTZ MODEL 2245 AM/FM STEREO RECEIVER

For superb FM stereo, clean power, and sophisticated control, the moderately-priced Model 2245 is unmatched at its price. With professional quality, impressive specs, and features galore, the Model 2245 delivers a full 90 Watts continuous RMS into 8 ohm speakers from 20Hz to 20kHz, with under 0.3% total harmonic and intermodulation distortion. Frequency response is ±0.5dB. Preamp control section includes: stepped, three-zone tone controls for BASS, MID, TREBLE; provisions for two tape decks, phones, four-channel adaptors; ultra low-noise, low-distortion FET RF, and IF circuitry; massive heat sinks, direct-coupled output circuitry, automatic protection for internal circuitry and associated speakers; plus gold-anodized front panel. Completely enclosed metal chassis is finished in simulated walnut.

16¾" x 5" x 14", 35 lbs., shown with optional WC-22 walnut cabinet



MARANTZ MODEL 2270 AM/FM STEREO RECEIVER

Next to the fabulous Marantz $1,000 Model 19, this is the finest receiver available. It delivers 140 Watts continuous RMS into 8 ohm speakers from 20Hz to 20kHz, with under 0.3% total harmonic and intermodulation distortion. Frequency response is an incredible ±0.25dB! The Model 2270 offers: individual stepped, three-zone tone controls for BASS, MID, TREBLE; provisions for four tape decks, phones, 4-channel adaptors, ultra low-noise, low-distortion FET, RF and IF circuitry; massive heat sinks; direct-coupled output circuitry; automatic protection for internal circuitry and associated speakers; and Marantz' gold-anodized front panel. Completely enclosed metal chassis is finished in simulated walnut.

Compare the outstanding Model 2270 with any other receiver!

16¾" x 5" x 14", 40 lbs., shown with optional WC-22 walnut cabinet

AM/FM TUNER	2270	2245	2230	2215
FM QUIETING SLOPE:				
RF INPUT FOR 30dB QUIETING:	1.4µV	1.7µV	2.0µV	2.1µV
QUIETING AT 5µV RF INPUT:	55dB	54dB	51dB	50dB
QUIETING AT 10µV RF INPUT:	68dB	66dB	57dB	56dB
QUIETING AT 30µV RF INPUT:	67dB	63dB	63dB	60dB
TOTAL HARMONIC DISTORTION:				
STEREO	0.05%	0.08%	0.30%	0.50%
MONO	0.15%	0.15%	0.15%	0.30%
SELECTIVITY: alternate carrier	80dB	60dB	60dB	50dB
CAPTURE RATIO:	1.5dB	1.6dB	2.5dB	3.0dB
STEREO SEPARATION: at 1kHz	45dB	42dB	42dB	40dB
SPURIOUS REJECTION:	95dB	95dB	80dB	65dB
IMAGE REJECTION:	90dB	80dB	70dB	60dB
AM SUPPRESSION:	65dB	60dB	50dB	45dB
IF REJECTION:	90dB	90dB	80dB	60dB
AM SENSITIVITY:	20µV	20µV	30µV	35µV
PREAMPLIFIER				
PHONO SECTION:				
DYNAMIC RANGE: ratio of input overload voltage to equivalent noise (A weighted)	95dB	96dB	94dB	93dB
SENSITIVITY: for rated output	1.8mV	1.7mV	1.8mV	2.1mV
EQUIVALENT NOISE INPUT: A weighted	1.5µV	1.5µV	1.5µV	2.2µV
MICROPHONE INPUT SENSITIVITY:	1.8mV	1.8mV	1.8mV	2.1mV
HIGH LEVEL INPUT SENSITIVITY:	18.2mV	18.2mV	18mV	150mV
PREAMPLIFIER OUTPUT LEVEL:	1.0 Volt	1.0 Volt	1.0 Volt	—
HEADPHONE OUTPUT LEVEL:	1.45 Volts	1.2 Volts	1.0 Volt	0.7 Volt
TONE CONTROLS:				
BASS: 50Hz	±15dB	±15dB	±15dB	±12dB
MID: 700Hz	±6dB	±6dB	±6dB	—
TREBLE: 15kHz	±15dB	±15dB	±15dB	±12dB
POWER AMPLIFIER				
POWER OUTPUT: rms continuous at 8 ohms, both channels driven, at or below rated distortion, 20Hz to 20kHz	140 Watts (70/Ch.)	90 Watts (45/Ch.)	60 Watts* (30/Ch.)	30 Watts* (15/Ch.)
INTERMODULATION DISTORTION: at or below rated power, any combination of two frequencies, 20Hz to 20kHz	0.3%	0.3%	0.5%*	0.5%*
TOTAL HARMONIC DISTORTION: at or below rated power, any frequency from 20Hz to 20kHz	0.1%	0.1%	0.5%*	0.5%*
FREQUENCY RESPONSE: 20Hz to 20kHz from AUX input	±0.25dB	±0.5dB	±0.5dB	±1.0dB
POWER BANDWIDTH: IHF, both channels driven	7Hz to 70kHz	7Hz to 70kHz	15Hz to 50kHz	15Hz to 50kHz
BASIC AMPLIFIER INPUT SENSITIVITY AND IMPEDANCE:	1.0 Volt 100kΩ	1.0 Volt 100kΩ	1.0 Volt 47kΩ	—
DAMPING FACTOR:	50	55	50	45

*20Hz to 20kHz

(continued from page 3)

On the opposite page are more than thirty different specifications describing Marantz receivers. Although many companies provide even more detail, additional data is practically meaningless to the average stereo buyer. Furthermore, an understanding of the fundamental specifications listed below is all that you need to accurately compare the performance of various receivers.

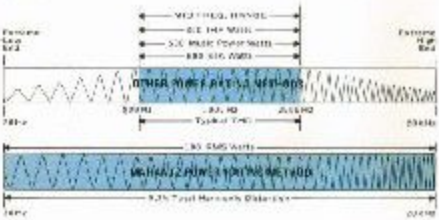
QUIETING SLOPE — This single most important tuner specification (sometimes know as *sensitivity curve*) shows relative noise suppression for several different incoming FM signal strengths. Rule: the larger the number (in dB) for a given signal strength, the better. Also, note that only 30 dB of quieting (which approximates the familiar *IHF Sensitivity* rating) gives no indication of tuner's ultimate performance by modern standards.

STEREO DISTORTION — (or "FM Distortion, Stereo") is introduced by the circuitry of any tuner. Obviously, the lower the amount of this distortion, the better the tuner. But keep in mind that FM distortion specifications are always monaural, unless stereo is specified. This is important, since stereo distortion is often up to 300% greater than monaural distortion.

SELECTIVITY — The ability of a tuner to cleanly select one station from many stations crowded closely together on the tuning dial.

DYNAMIC RANGE — A preamplifier's most difficult task is to amplify the phonograph (phono) signal, which is only 1/100 as strong as the signal from a tape recorder or tuner. Consequently, the phono amplifying stages of the preamplifier must not be audible above the music or distort when higher level signal peaks, like a cymbal crash, are fed into it. These two requirements are expressed as dynamic range, or the ratio of internally-generated noise to maximum signal.

POWER OUTPUT — This rating is meaningful only if full power at given frequency extremes is stated, with both channels continuously driving 8-ohm speakers, along with the distortion generated under these conditions! Part-truth rating methods, such as IHF, EIA, or Music Power don't help. And even conservative RMS Watts can be misleading. Unless specified otherwise, an RMS Watts rating only applies to available power at middle frequencies between 50Hz (cycles per second) and 2000 Hz. That's why you should look for the continuous RMS rating at the frequency extremes as shown in the illustration below.



INTERMODULATION DISTORTION or IM distortion, is the generation of dissonant frequencies which, if excessive, can literally cause headaches. Low IM distortion automatically indicates low total harmonic distortion (THD), which results in pleasant listening.

In the following chart, we've established handy guidelines for each of the significant receiver specifications listed above. Each specification is rated so you'll know exactly what kind of performance to expect from any receiver.

SIMPLIFIED RECEIVER PERFORMANCE COMPARISON CHART

	FM Quieting db @ 10 uv	db FM Selectivity	% FM Stereo Distortion	Dynamic Range, dB	% IM Distortion	Method of Stating Power in Watts
Excellent	60 or over	75 or over	0.25 or under	100 or over	0.3 or under	Full Range RMS or Full Range Continuous
Very Good	55	55	0.5	90	1.0	RMS or Continuous
Good	50	45	0.75	80	2.0	IHF, Music or Dynamic
Poor	under 50	under 45	over 0.75	under 80	over 2.0	±1dB, EIA, or Peak

Rear view: Marantz Model 2215 Stereophonic Receiver (30 Watts RMS)

Rear view: Marantz Model 2230 Stereophonic Receiver (60 Watts RMS)

Rear view: Marantz Model 2245 Stereophonic Receiver (90 Watts RMS)

Rear view: Marantz Model 2270 Stereophonic Receiver (340 Watts RMS)

MARANTZ IMPERIAL SPEAKER SYSTEMS.

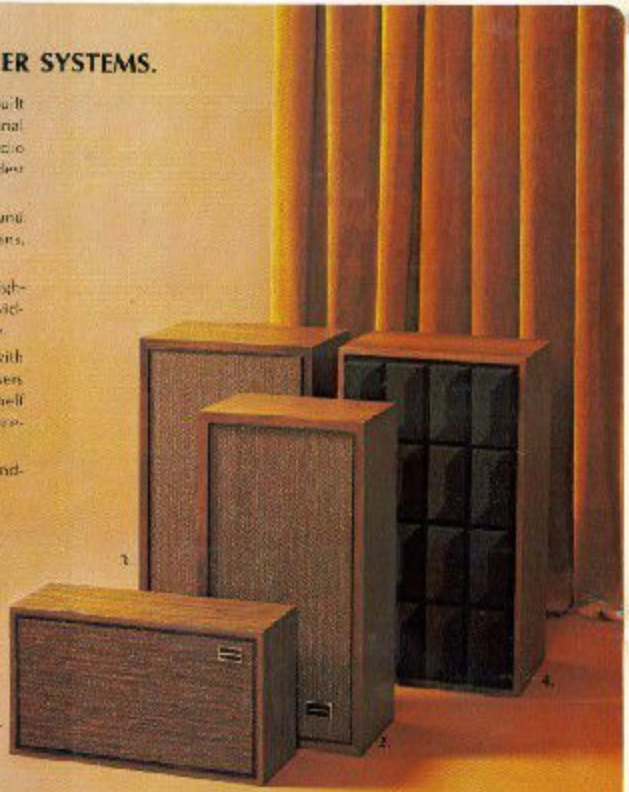
Offering the same uncompromised quality built into every Marantz component, our Imperial Speaker Systems bring out the ultimate in audio performance. Even from amplifiers with modest power output.

Marantz speakers deliver the clear, clean sound demanded by recording engineers, musicians, audio professionals.

And special features, like multi-position high-frequency control, let you fine-tune for individual room acoustics to suit your personal taste.

Elegantly enclosed in hand-rubbed walnut with matching decorator grilles, Marantz speakers blend with any interior. And compact, bookshelf styling allows you greater freedom of placement in your home.

Marantz Imperial Speakers. . . . each an outstanding value in sound reproduction.



1. Imperial 4B Speaker
2. Imperial 5 Speaker
3. Imperial 6 Speaker
4. Imperial 7 Speaker

Marantz Three Year Parts and Labor Warranty

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We sound better.

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